Arjuna JEE 2023

Basic Maths

DPP-04

1. Solve the $|x| = 5$.
(1) +5 (2) –5
(3) ±5 (4) None of these

2. Value of 'x' satisfying equation: $|x – 2| = 3$.
(1) –1, 5 (2) 1, –5
(3) –5, –1 (4) 1, 5

3. Solve $|x| + |x – 2| = 2$.
(1) $0 \le x < 2$ (2) $x \le 2$
(3) $x \ge 0$ (4) $0 < x < 2$

4. Solve $|x + 1| + |x – 1| = 2$
(1) $x \in (–1, 1)$ (2) $x \in [–1, 1]$
(3) $x \in [1, 2]$ (4) $x \in (1, 2)$

5. Solve $|x| + |x – 2| = 2$.
(1) $0 \le x < 2$ (2) $x \le 2$
(3) $x \ge 0$ (4) $0 < x < 2$

6. If $f(x) = \frac{x-|x|}{|x|}$, then $f(-1) =$

7. Value of 'x' satisfying equation: $|x – 2| = 3$.
(1) –1, 5 (2) 1, –5
(3) –5, –1 (4) 1, 5

8. Solve: $x^2 – 7|x| – 8 = 0$ then value(s) of x satisfying the equation are
(1) ± 1 (2) ± 8
(3) ± 9 (4) ± 10

9. $(x – 3)^2 + |x – 3| – 11 = 0$ the sum of solutions of equation is
(1) 5 (2) 6
(3) 7 (4) 8

10. If $f(x) = |2 – x| + |4 – x|$ and $\frac{f(\pi)+f(2.1)}{f(3)} = \lambda$ then the value of $\frac{17\lambda}{4}$ is
(1) 8.5 (2) 8
(3) 4.25 (4) 17

11. Solve for x:
(1) $|2x-3| = 2$
(2) $|3x-5| = 4$
(3) $|5+3x| = 1$

12. Solve for x
(1) $|x-1|+|x-5| = 6$
(2) $|x-2|+|x-5| = 3$
(3) $|x-2|+|x-6| = 2$

13. Solve for x
(1) $|x| = 2$
(2) $|x-1| = 5$
(3) $|3+x| = 2$

14. $x^2 - 2|x| - 3 = 0$

Answer Key

1. (3)
2. (1)
3. (1)
4. (2)
5. (1)
6. (–2)
7. (1)
8. (2)
9. (2)
10. (1)

11. (1) $x=\frac{1}{2},\frac{5}{2}$

(2) $x=\frac{1}{3},3$

(3) $x=-2,\frac{-4}{3}$

12. (1) $x=0,6$

(2) $x\in[2,5]$

(3) No solution

13. (1) $x=\pm 2$

(2) $x=-4,6$

(3) $x=-1,-5$

14. $(x=\pm 3)$

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